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ENTOMOLOGY

A Part of the 4-H Entomology Project

Unit Two Insect Growth And Development



What You Do In This Unit

In this unit, you will learn how insects develop — how they molt, grow, and change form. You will also learn to recognize different types of immature insects. By working on this unit, you will improve your ability to identify adult insects and you will expand your insect collection.

Requirements Of This Unit

1. Learn the four basic types of insect metamorphosis.
2. Learn the type of metamorphosis for each order.
3. Make a rearing cage and rear an insect through its life stages.
4. Collect and identify at least five immature insects in each of five different orders.
5. Collect, mount and identify 50 insects in at least eight orders.
6. Make any collection equipment needed.
7. Submit a completed 4-H Entomology Record Sheet (4-H F 8).

How To Get Started

Chapter II of the 4-H Entomology Manual (4-H 26) describes insect growth and development. Study this carefully, then use Chapter VII, especially the "Key To Immature Insects," to learn what the immatures in each order look like.

Ways to rear several different insects are described in Chapter VI of the manual. You will need to make some sort of rearing cage. Plastic refrigerator containers work well for many insects. Rearing cages don't have to be fancy, but they must be easy to get into so you can add fresh food and remove old food. A cage also needs ventilation, especially if it contains plants. Plants give off water vapor which can condense in unventilated cages and drown your insects. Remember that insects may be very picky about what they eat, so feed them the same type of food they eat in nature. If you find a caterpillar on clover, rear it on clover.

Some insects are easy to rear, while others aren't. Don't be disappointed if you find some insects are difficult to rear. Keep rearing insects and try to learn what "your" insect requires. Take notes so you will have a record of what works and what doesn't.

To make the insect collection required by this unit, begin with the collection made for Unit 1. You may use any or all of the insects from the Unit 1 collection, but the Unit 2 collection must contain at least 25 insects and 2 orders that are different from those in the Unit 1 collection. For exhibition at the state fair, the Unit 2 collection is limited to two boxes.

Questions You Should Ask Yourself

1. Do I understand the different types of insect metamorphosis and do I know which type each order has?
2. What type of metamorphosis did the insect I reared have? How many days were required to complete the life cycle? How many times did it molt? How many days between molts?
3. Can I clearly explain how insects develop to someone who has never studied insects?
4. Can I identify the immatures of the various orders?
5. What is a caterpillar? a sawfly? a grub? a maggot? a cutworm? a wireworm?
6. Do I know where the immatures of each order generally live and what they normally eat?



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